

## Quick Facts

### About... Food Poisoning

#### What is Food Poisoning?

Food poisoning (also called foodborne intoxication) is caused by toxins (poisons) produced by certain kinds of bacteria that have grown in food due to improper holding or cooking temperatures. Most outbreaks occur in large-scale food-serving facilities with inadequate cooling and refrigeration practices, such as restaurants, catering companies, cafeterias, and schools.

Most cases of food-related illness are not due to food intoxication but are due to bacterial or viral infection such as *Salmonella*, *E. coli*, and *Norovirus*. Once the bacteria or virus is consumed, it multiplies in the gastrointestinal tract. Symptoms from infections can occur anywhere from 6 hours to 7 days after consuming contaminated food, whereas symptoms from food poisoning can occur very soon (as little as one hour) after consuming contaminated food.

The most common bacterial causes of food poisoning are:

- *Staphylococcus aureus*, which is commonly found on the skin and in the nose, mouth, and throat of many healthy people. These bacteria sometimes cause skin infections, such as acne or boils. These bacteria have occasionally been found in cows, dogs, and birds.
- *Bacillus cereus*, which is found in the soil and environment. These bacteria can form spores, which are highly resistant to temperature changes and drying, allowing the bacteria to survive harsh environments.
- *Clostridium perfringens*, which is found in soil and in the gastrointestinal tracts of healthy people and animals, such as cattle, fish, pigs, and poultry. These bacteria can also form spores, which are highly resistant to temperature changes and drying, allowing the bacteria to survive harsh environments.

#### How is food poisoning spread?

Foods generally become contaminated with bacteria that cause food poisoning through unwashed hands or contamination from environmental sources. Food that is not cooked thoroughly or not stored at proper temperatures can allow bacteria to grow and produce toxins in the food. Several toxins are heat stable, so the toxins will survive heating of the food even if bacteria do not. Unlike viral and bacterial causes of foodborne infection, food poisoning is NOT spread from person to person.

- *Staphylococcus aureus* contamination can occur when someone handles food with bare hands, especially after touching the face or mouth, or has an exposed sore on hands or arms. Foods commonly involved include:
  - Salad dressing.
  - Creamy, non-lettuce salads, e.g., egg, tuna, chicken, potato, and macaroni.
  - Cream-filled bakery products, e.g., cream-filled pastries, cream pies, and chocolate éclairs.
  - Sandwiches, e.g., ham and salami.
  - Dairy-based products, e.g., custard.
- *Bacillus cereus* contamination can occur if soil is not properly removed from food items prior to cooking or if food is cross-contaminated with other foods containing soil. *Bacillus cereus* toxins can cause two types of illness, vomiting syndrome and diarrheal syndrome. Foods commonly involved include:
  - Diarrheal type: Meats, milk, vegetables, and fish.
  - Vomiting type: Cooked rice, potato, pasta, and cheese products.
- *Clostridium perfringens* contamination can occur if foods of animal origin are not fully cooked or if food is cross-contaminated with soil or uncooked foods of animal origin. Foods commonly involved include:
  - Large cuts of meat, such as roasts.
  - Stews and meat pies.
  - Meat-based gravies.
  - Casseroles.
  - Refried beans.

#### **What are the symptoms of food poisoning?**

- Diarrhea

- Vomiting
- Nausea
- Cramps
- Weakness

Symptoms often begin suddenly and violently. Fever is generally NOT a symptom of food poisoning. Dehydration may result from prolonged vomiting and diarrhea, but severe complications or death is extremely rare. The symptoms and the time from exposure to symptom onset vary depending on the cause of food poisoning.

- *Staphylococcus aureus*: Symptoms usually begin within 2-4 hours (range of 30 minutes-8 hours) after exposure and last 24-48 hours. The main symptoms include nausea and vomiting.
- *Bacillus cereus*:
  - Diarrheal type: Symptoms usually begin within 6-24 hours after exposure and last 24 hours. The main symptoms include diarrhea and cramps.
  - Vomiting type: Symptoms usually begin within 30 minutes-6 hours after exposure and last 24 hours. The main symptoms include nausea and vomiting.
- *Clostridium perfringens*: Symptoms usually begin within 10-12 hours (range of 6-24 hours) after exposure and last less than 24 hours. The main symptoms include diarrhea and cramps.

### **How do I know if I have food poisoning?**

Anyone having diarrhea lasting more than 24 hours should consult a health care provider. The illness is usually diagnosed by symptoms and rapid onset, but your health care provider may order tests to rule out other conditions.

### **How is food poisoning treated?**

There is no vaccine or medication to cure food poisoning. Treatment is based on relieving symptoms. People with diarrhea and vomiting should drink plenty of fluids to avoid dehydration.

### **Is food poisoning a reportable disease?**

No. Food poisoning is not a reportable condition. However, an outbreak of food poisoning would be reportable.

### **How can food poisoning be prevented?**

In general, food poisoning can be prevented by strictly adhering to the following guidelines:

- Practice good hygiene:

- Thoroughly wash hands with soap and water: after using the restroom; after assisting someone with diarrhea and/or vomiting; after contact with animals; after swimming; before, during, and after food preparation; and after handling raw meat products (please refer to Quick Facts about Hand Washing).
- Clean food preparation work surfaces, equipment, and utensils with soap and water before, during, and after food preparation, especially after contamination with raw meat products.
- Maintain safe food temperatures:
  - Ensure proper temperatures are maintained during refrigeration (<40°F), freezing (<2°F), holding (keep food hot or at room temperature for no longer than 2 hours), and chilling (chill immediately and separate into smaller containers if needed).
  - Thoroughly cook all food items to United States Department of Agriculture (USDA) recommended safe minimum internal temperatures.
    - 145°F – steaks, roasts, and fish
    - 160°F – pork, ground beef, and egg dishes
    - 165°F – chicken breasts and whole poultry
- Eat safe foods (Remember: Contaminated foods may look and smell normal):
  - Do not eat undercooked meat, poultry, or eggs.
  - Do not eat foods past the expiration date.
  - Do not eat unpasteurized dairy products; it is illegal to sell unpasteurized dairy products in Indiana.
  - Wash all produce before eating raw or cooking.
  - Use treated water for washing, cooking, and drinking.
- Protect others:
  - Exclude food handlers with exposed infections, such as a boil or cut on the hands, from food preparation and handling.
  - Touch food with bare hands as little as possible. Do not handle food with bare hands after touching your face or if you have open sores on your hands.

## **Where can I learn more about food poisoning?**

To search the Indiana Food Protection Program:

<http://www.in.gov/isdh/20640.htm>

To search disease information:

[http://www.cdc.gov/ncidod/dbmd/diseaseinfo/staphylococcus\\_food\\_g.htm](http://www.cdc.gov/ncidod/dbmd/diseaseinfo/staphylococcus_food_g.htm)

<http://www.cfsan.fda.gov/~mow/chap3.html>

<http://www.cfsan.fda.gov/~mow/chap12.html>

<http://www.cfsan.fda.gov/~mow/chap11.html>

To search for national data, statistics, and outbreaks:

[www.cdc.gov/mmwr/](http://www.cdc.gov/mmwr/)

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